

**INFORMATION DISCLOSURE  
CITATION**

PTO-1449

ATTORNEY'S DOCKET NO.:

2000-022R1

APPLICATION NO.:

09/801,390

APPLICANT:

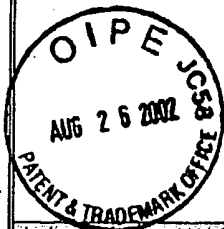
Bergh et al.

FILING DATE:

3/7/2001

GROUP:

1764




**RECEIVED**  
AUG 27 2002  
TC 1700

**US PATENT DOCUMENTS**

| EXAMINER'S<br>INITIALS | PATENT NO. | DATE     | NAME             | CLASS | SUBCLASS | FILING<br>DATE |
|------------------------|------------|----------|------------------|-------|----------|----------------|
| AS                     | 3,431,077  | 3/04/69  | Danforth         | 23    | 253      | 7/18/66        |
|                        | 3,536,452  | 10/27/70 | Norton et al.    | 23    | 259      | 12/10/62       |
|                        | 4,099,923  | 7/11/78  | Milberger        | 23    | 254 R    | 1/17/77        |
|                        | 4,705,669  | 11/10/87 | Tsuji et al.     | 422   | 93       | 8/27/86        |
|                        | 4,869,282  | 9/26/89  | Sittler et al.   | 137   | 15       | 12/09/88       |
|                        | 4,996,387  | 2/26/91  | Gerhold et al.   | 585   | 654      | 7/20/89        |
|                        | 5,089,232  | 2/18/92  | May              | 422   | 83       | 1/24/90        |
|                        | 5,252,294  | 10/12/93 | Kroy et al.      | 422   | 102      | 2/03/92        |
|                        | 5,304,354  | 4/19/94  | Finley et al.    | 422   | 196      | 11/30/92       |
|                        | 5,324,483  | 6/28/94  | Cody et al.      | 422   | 131      | 2/02/93        |
|                        | 5,417,938  | 5/23/95  | Shelden et al.   | 422   | 196      |                |
|                        | 5,534,328  | 7/09/96  | Ashmead et al.   | 428   | 166      | 12/02/93       |
|                        | 5,580,523  | 12/03/96 | Bard             | 422   | 50       | 4/01/94        |
|                        | 5,589,136  | 12/31/96 | Northrup et al.  | 422   | 102      | 6/20/95        |
|                        | 5,593,642  | 1/14/97  | DeWitt et al.    | 422   | 131      | 6/05/95        |
|                        | 5,595,712  | 1/21/97  | Harbster et al.  | 422   | 129      | 7/25/94        |
|                        | 5,603,351  | 2/18/97  | Cherukuri et al. | 137   | 597      | 6/07/95        |
|                        | 5,611,214  | 3/18/97  | Wegeng et al.    | 62    | 498      | 7/29/94        |
|                        | 5,639,423  | 6/17/97  | Northrup et al.  | 122   | 50       | 8/31/92        |
|                        | 5,658,537  | 8/19/97  | Dugan            | 422   | 191      | 7/18/95        |
|                        | 5,690,763  | 11/25/97 | Ashmead et al.   | 156   | 60       | 6/06/95        |
|                        | 5,750,906  | 5/12/98  | Parker et al.    | 73    | 863.73   | 10/29/96       |
|                        | 5,776,359  | 7/07/98  | Schultz et al.   | 252   | 62.51    | 5/08/95        |
|                        | 5,780,748  | 7/14/98  | Barth            | 73    | 861.47   | 1/29/97        |
|                        | 5,811,062  | 9/22/98  | Wegeng et al.    | 422   | 129      | 2/23/96        |
|                        | 5,833,926  | 11/10/98 | Wurzel et al.    | 422   | 81       | 10/24/95       |
|                        | 5,842,787  | 12/01/98 | Kopf-Sill et al. | 366   | 340      | 10/9/97        |
|                        | 5,843,385  | 12/01/98 | Dugan            | 422   | 191      | 4/02/97        |
| AS                     | 5,863,801  | 1/26/99  | Southgate et al. | 436   | 63       | 6/14/96        |

Arden Soderquist 9/27/04

|  |  |                        |  |                  |  |
|--|--|------------------------|--|------------------|--|
| <b>INFORMATION DISCLOSURE CITATION</b><br> PTO-1449 |  | ATTORNEY'S DOCKET NO.: |  | APPLICATION NO.: |  |
|  |  | 2000-022R1             |  | 09/801,390       |  |
|  |  | APPLICANT:             |  |                  |  |
|  |  | Bergh et al.           |  |                  |  |
|  |  | FILING DATE:           |  | GROUP:           |  |
|  |  | 3/7/2001               |  | 1764             |  |


RECEIVED  
 AUG 27 2002  
 TC 1700

| US PATENT DOCUMENTS |                |          |                   |       |          |             |
|---------------------|----------------|----------|-------------------|-------|----------|-------------|
| EXAMINER'S INITIALS | PATENT NO.     | DATE     | NAME              | CLASS | SUBCLASS | FILING DATE |
| 98                  | 5,865,417      | 2/02/99  | Harris et al.     | 251   | 11       | 9/27/96     |
|                     | 5,869,004      | 2/09/99  | Parce et al.      | 422   | 100      | 6/09/97     |
|                     | 5,872,010      | 2/16/99  | Karger et al.     | 436   | 173      | 7/03/96     |
|                     | 5,922,591      | 7/13/99  | Anderson et al.   | 435   | 287.2    | 6/27/96     |
|                     | 5,927,325      | 7/27/99  | Bensaoula et al.  | 137   | 599      | 10/25/96    |
|                     | 5,959,297      | 9/28/99  | Weinberg et al.   | 250   | 288      | 10/8/97     |
|                     | 5,985,356      | 11/16/99 | Schultz et al.    | 427   | 8        | 10/18/94    |
|                     | 6,004,617      | 12/21/99 | Schultz et al.    | 427   | 8        | 6/07/95     |
|                     | 6,030,917      | 2/29/00  | Weinberg et al.   | 502   | 104      | 7/22/97     |
|                     | 6,033,544      | 3/07/00  | Demers et al.     | 204   | 450      | 11/7/96     |
|                     | 6,063,633      | 5/16/00  | Willson           | 436   | 37       | 6/17/96     |
|                     | 6,087,181      | 7/11/00  | Cong              | 436   | 37       | 3/16/98     |
|                     | 6,149,882      | 11/21/00 | Guan et al.       | 422   | 211      | 6/09/98     |
|                     | 6,175,409      | 1/16/01  | Nielsen et al.    | 356   | 337      | 4/02/99     |
|                     | US-20020014106 | 2/07/02  | Srinivasan et al. |       |          | 3/07/01     |
|                     | US-20020042140 | 4/11/02  | Hagemeyer et al.  |       |          | 7/09/01     |
|                     | US-20020045265 | 4/18/02  | Bergh et al.      |       |          | 3/08/01     |
| ab                  | US-20020048536 | 4/25/02  | Bergh et al.      |       |          | 3/07/01     |

| FOREIGN DOCUMENTS   |                  |          |                |       |           |                    |
|---------------------|------------------|----------|----------------|-------|-----------|--------------------|
| EXAMINER'S INITIALS | PATENT NO.       | DATE     | COUNTRY        | CLASS | SUB CLASS | TRANSLATION YES NO |
| 98                  | 967,261          | 3/15/62  | United Kingdom | B01J  |           |                    |
|                     | DD 234 941 A1    | 4/16/86  | Germany        | G01N  | 31/10     | x                  |
| ab                  | DE 27 14 939 B2  | 11/29/79 | Germany        | G01N  | 31/10     | x                  |
|                     | DE 196 32 779 A1 | 2/19/98  | Germany        | G01N  | 35/00     | x                  |
|                     | DE 198 05 719 A1 | 8/19/99  | Germany        | B01J  | 35/04     | x                  |
|                     | DE 198 06 848 A1 | 8/19/99  | Germany        | B01J  | 35/02     | x                  |
|                     | DE 198 09 477 A1 | 9/16/99  | Germany        | G01N  | 31/10     | x                  |
| ab                  | DE 198 55 894 A1 | 6/08/00  | Germany        | B01J  | 35/04     | x                  |

Arten Soderquist

9/28/04


|   |  |                        |  |                  |  |
|---|--|------------------------|--|------------------|--|
| <b>INFORMATION DISCLOSURE CITATION</b><br><br>PTO-1449<br><br> |  | ATTORNEY'S DOCKET NO.: |  | APPLICATION NO.: |  |
|   |  | 2000-022R1             |  | 09/801,390       |  |
|   |  | APPLICANT:             |  |                  |  |
|   |  | Bergh et al.           |  |                  |  |
|   |  | FILING DATE:           |  | GROUP:           |  |
|   |  | 3/7/2001               |  | 1764             |  |

RECEIVED  
 AUG 27 2002  
 TC 1700


| FOREIGN DOCUMENTS   |                 |          |         |       |           |                    |
|---------------------|-----------------|----------|---------|-------|-----------|--------------------|
| EXAMINER'S INITIALS | PATENT NO.      | DATE     | COUNTRY | CLASS | SUB CLASS | TRANSLATION YES NO |
| AS                  | EP 0 796 654 A2 | 9/24/97  | EPO     | B01J  | 19/00     |                    |
| AS                  | EP 0 886 143 A1 | 12/23/98 | EPO     | G01N  | 33/68     |                    |
| AS                  | WO 96/15576     | 5/23/96  | PCT     | H02K  | 44/02     |                    |
| AS                  | WO 97/32208     | 9/04/97  | PCT     | G01N  | 31/10     |                    |
| AS                  | WO 98/00231     | 1/08/98  | PCT     | B01J  | 19/00     |                    |
| AS                  | WO 98/03521     | 1/29/98  | PCT     | C07F  | 19/00     |                    |
| AS                  | WO 98/07026     | 2/19/98  | PCT     | G01N  | 31/10     | x                  |
| AS                  | WO 98/13137     | 4/02/98  | PCT     | B01J  | 19/00     |                    |
| AS                  | WO 98/13605     | 4/02/98  | PCT     | F15C  | 5/00      |                    |
| AS                  | WO 98/16949     | 4/23/98  | PCT     | H01J  | 49/40     | x                  |
| AS                  | WO 98/22811     | 5/28/98  | PCT     | G01N  | 27/26     |                    |
| AS                  | WO 98/53236     | 11/26/98 | PCT     | F16K  | 31/126    |                    |
| AS                  | WO 98/55852     | 12/10/98 | PCT     | G01N  | 27/26     |                    |
| AS                  | WO 98/56505     | 12/17/98 | PCT     | B01L  | 3/00      |                    |
| AS                  | WO 99/41005     | 8/19/99  | PCT     | B01J  | 19/00     | x                  |
| AS                  | WO 99/64160     | 12/16/99 | PCT     | B01L  | 3/02      |                    |
| AS                  | WO 00/09255     | 2/24/00  | PCT     | B01J  | 19/00     |                    |
| AS                  | WO 00/14529     | 3/16/00  | PCT     | G01N  | 31/02     |                    |
| AS                  | WO 00/17413     | 3/30/00  | PCT     | C23C  | 14/04     |                    |
| AS                  | WO 00/51720     | 9/08/00  | PCT     | B01J  | 19/00     |                    |
| AS                  | WO 01/00315     | 1/04/01  | PCT     | B01J  | 19/00     |                    |
|                     |                 |          |         |       |           |                    |

| OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages etc.) |  |
|---|--|
| AS  | Berenschot, J.W., et al., "Micromachining of {111} Plates in <001> Oriented Silicon", <i>J. Micromech. Microeng.</i> 8 (1998) 104-107  |
| AS  | Brenchley, D.L. et al, "Status of Microchemical Systems Development in the United States of America", AICHE, 2 <sup>nd</sup> International Conference on Microreaction Technology, New Orleans, Louisiana, March 9-12, 1998, pp. 18-23 |
| AS  | Bruns, M.W., "The Application of Silicon Micromachining Technology and High Speed Gas Chromatography to On-Line Process Control", <i>MTI Analytical Instruments</i>  |
| AS  | Bruns, M.W., "Silicon Micromachining and High Speed Gas Chromatography", <i>IEEE</i> , 1992, pp. 1640-1644   |

*Allen Soderquist 9/28/04*

|  |   |                                    |
|--|---|------------------------------------|
| <b>INFORMATION DISCLOSURE CITATION</b><br><br> PTO-1449 | ATTORNEY'S DOCKET NO.:<br><br>2000-022R1  | APPLICATION NO.:<br><br>09/801,390 |
|  | APPLICANT:<br><br>Bergh et al.  |                                    |
|  | FILING DATE:<br>3/7/2001  | GROUP:<br>1764                     |
| <b>OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages etc.)</b>   |   |                                    |
| as   | Bryzek, J. et al., "Micromachines on the March", <i>IEEE Spectrum</i> , 1994, pp. 20-31   |                                    |
| as   | Burns, J.R. et al., "Development of a Microreactor for Chemical Production", AICHE, 2 <sup>nd</sup> International Conference on Microreaction Technology, New Orleans, Louisiana, March 9-12, 1998, pp. 39-44                           |                                    |
| as   | Cooke, William S., 403P "Decreasing Gas Chromatography Analysis Times Using a Multicapillary Column", PITTCON '96, Chicago, Illinois, March 3-8, 1996   |                                    |
| as   | Franz, A.J. et al., "New Operating Regimes and Applications Feasible with Microreactors", MIT, 1997, pp. 33-38  |                                    |
| as   | Greenway, G.M. et al., "The Use of a Novel Microreactor for High Throughput Continuous Flow Organic Synthesis", <i>Sensors and Actuators B</i> , 2000, pp. 153-158  |                                    |
| as   | Grosjean et al., "A Practical Thermopneumatic Valve", <i>IEEE</i> , 1999, pp. 147-152   |                                    |
| as   | Haswell, Stephen J. et al., "The Application of Micro Reactors to Synthetic Chemistry", <i>Chem. Commun.</i> , 2001, 391-398  |                                    |
| as   | Hendrix, Charles D., "What Every Technologist Should Know About Experimental Design", <i>Chemtech</i> , 1979, pp. 167-174   |                                    |
| as   | Henning, A.K. et al., "Microfluidic MEMS for Semiconductor Processing", <i>IEEE</i> , 1998, Vol. 21, pp. 329-337  |                                    |
| as   | Hinderling, C. et al., "Rapid Screening of Olefin Polymerization Catalyst Libraries by Electrospray Ionization Tandem Mass Spectrometry", <i>Angew. Chem. Int. Ed.</i> , 1999, 38, No. 15, pp. 2253-2256                                |                                    |
| as   | Jäckel, K.-P., "Microtechnology: Application Opportunities in the Chemical Industry", <i>DECHEMA Monographs</i> , 1996, Vol. 132, VCH Verlagsgesellschaft, pp. 29-50  |                                    |
| as   | Johansson, S. et al., "Nanofabrication of Model Catalysts and Simulations of their Reaction Kinetics", <i>J. Vac. Sci. Technol.</i> , 1999, A 17(1), pp. 297-302  |                                    |
| as   | Klein, J. et al., "Combinatorial Material Libraries on the Microgram Scale with an Example of Hydrothermal Synthesis", <i>Angew. Chem. Int. Ed.</i> , 1998, 37(24), 3369-3372   |                                    |
| as   | Lambert, R.H. et al., "Utilization of a Portable Microchip Gas Chromatograph to Identify and Reduce Fugitive Emissions at a Pharmaceutical Manufacturing Plant", <i>Field Analytical Chemistry and Technology</i> , 1997, 1(6): 367-374 |                                    |
| as   | Löwe, H. et al., "Microreactor Concepts for Heterogeneous Gas Phase Reactions", AICHE, 2 <sup>nd</sup> International Conference on Microreaction Technology, New Orleans, Louisiana, March 9-12, 1998, pp. 63-73                        |                                    |
| as   | Matlosz, M. et al., "Microsectioned Electrochemical Reactors for Selective Partial Oxidation", AICHE, 2 <sup>nd</sup> International Conference on Microreaction Technology, New Orleans, Louisiana, March 9-12, 1998, pp. 54-59         |                                    |
| as   | Oosterbroek, R.E. et al., "Utilizing the {111} Plane Switch-Over Etching Process for Micro Fluid Control Applications"  |                                    |
| as   | Pérez-Ramírez, J. et al., "The Six-Flow Reactor Technology-A Review on Fast Catalyst Screening and Kinetic Studies", <i>Catalysis Today</i> , 2000, 60, 93-109  |                                    |
| as   | Randhava, R. et al., "Advanced Configurations for Catalyst Research", <i>CEP</i> , 1983, pp. 52-58  |                                    |
| as   | Rich et al., "An 8-Bit Microflow Controller Using Pneumatically-Actuated Valves", <i>IEEE</i> , 1999, pp. 130-134   |                                    |
| as   | Sadler, D.J. et al., "A New Magnetically Actuated Microvalve For Liquid and Gas Control Applications", Center for Microelectronic Sensors and MEMS, University of Cincinnati  |                                    |

*Allen Soderquist 3/28/04*

|   |  |                                    |
|---|--|------------------------------------|
| <b>INFORMATION DISCLOSURE CITATION</b><br><br>PTO-1449<br><br> | ATTORNEY'S DOCKET NO.:<br><br>2000-022R1   | APPLICATION NO.:<br><br>09/801,390 |
|   | APPLICANT:<br><br>Bergh et al.   |                                    |
|   | FILING DATE:<br>3/7/2001   | GROUP:<br>1764                     |
| <b>OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages etc.)</b>  |  |                                    |
| <i>as</i>   | Sie, S.T., "Miniaturization of Hydroprocessing Catalyst Testing Systems: Theory and Practice", <i>AICHE Journal</i> , 1996, Vol. 42, No. 12, pp. 3498-3507   |                                    |
| <i>as</i>   | Srinivasan, R. et al., "Micromachined Reactors for Catalytic Partial Oxidation Reactions", <i>AICHE Journal</i> , 1997, Vol. 43, No. 11, pp. 3059-3069   |                                    |
| <i>as</i>   | Tonkovich, A.Y. et al., "The Catalytic Partial Oxidation of Methane in a Microchannel Chemical Reactor", <i>AICHE</i> , 2 <sup>nd</sup> International Conference on Microreaction Technology, New Orleans, Louisiana, March 9-12, 1998, pp. 45-53.   |                                    |
| <i>as</i>   | Wang et al., "A Parylene Micro Check Valve", <i>IEEE</i> , 1999, pp. 177-182   |                                    |
| <i>as</i>   | Weißmeier, G. et al., "Strategy for the Development of Micro Channel Reactors for Heterogeneously Catalyzed Reactions" <i>24-32</i>  |                                    |
|   | <del>Wijngaarden et al., "Industrial Catalysts - Optimizing Catalysts and Processes", Wiley-VCH, Germany (1998).</del>   |                                    |
| <i>as</i>   | Zdeblick et al., "Thermopneumatically Actuated Microvalves and Integrated Electro-Fluidic Circuits", TRF, Solid State Sensor and Actuator Workshop, Hilton Head, South Carolina, June 13-16, 1994, pp. 251-255   |                                    |
| <i>as</i>   | Zech, T. et al., "Simultaneous Screening of Catalysts in Microchannels: Methodology and Experimental Setup"  |                                    |
| <i>as</i>   | Zieren, M. et al., "Time-Resolved Calorimetry in a New Type of Micro-Fluid Reactor Using Spatially Separated Thin-Film Thermopiles and FIA-Technique", <i>AICHE</i> , 2 <sup>nd</sup> International Conference on Microreaction Technology, New Orleans, Louisiana, March 9-12, 1998, pp. 154-163. |                                    |
| EXAMINER:<br><i>Robert Rodriguez</i>  | DATE CONSIDERED:<br><i>9/28/02</i>   |                                    |

Examiner: Initial if reference considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

RECEIVED  
AUG 27 2002  
TC 1700

not submitted

